

IN QUEST OF DINAPATE WRIGHTII.

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About a year and a half ago Mr. H. C. Fall, of Pasadena, first showed me the single specimen of *Dinapate wrightii* in his very complete collection of North American coleoptera. I at once determined to try to add this rare and unique beetle to my collection of California coleoptera which was then just started. I also hoped to make some further study of its life history.

Dinapate wrightii was first described by Dr. George H. Horn,* from fragmentary specimens sent him by W. G. Wright, of San Bernardino, who discovered the species in Palm Canyon, on the northwestern border of the Colorado desert. Mr. Wright gave the locality as Mojave desert, no doubt wishing to keep the fruits of his discovery for himself and for eleven years he was successful. Just how many specimens he secured during this period I have been unable to find out; but certainly not many. Eleven years after Horn's publication of the species came Mr. H. G. Hubbard's letters to E. A. Schwarz† in which he announced its rediscovery, giving the true locality, its food plant and many interesting facts concerning its life history. The food plant turned out to be the Washington palm (*Neowashingtonia filifera*), which is found, in the United States, only in the canyons at the head of the Coachella valley in southern California.

April 14, 1916, I packed my camping outfit in the automobile and set out for Palm Canyon one hundred miles east of Pasadena. The roads were in very bad shape, owing to the unusually heavy rains of that winter, and it took all day to make what is usually a five-hour trip, but night found us in camp at the mouth of the canyon. The next morning I began a search of the canyon, going as far up as the palms extended, without finding a tree which fulfilled the conditions described by Hubbard. He says: "I am sure now that they do not oviposit in bare trunks or in healthy trees, although it is possible that the beetles kill the tree in which they oviposit their eggs."† May 15, one month later, I

* Trans. Am. Ent. Soc., Vol. XIII, p. 1, January, 1886.

† Ent. News, Vol. X, p. 83, April, 1899.

was back again, determined to search the neighboring canyons which contain palms. This was carried out, but in Andreas and Murray canyons I saw no dead palms of any description and was obliged to force myself through thorny brush and cactus, over fallen trees, just as Hubbard had done eleven years earlier.

Finally I returned to Palm Canyon and examined all of the bare fallen trunks of which I had noted several in my previous search. It is not an easy matter to chop into one of these palm trunks even when they have been dead for years, but I worked two days at it without success and was about to despair when a stroke of my axe turned out a larva about three fourths of an inch in length which I thought might be that of *Dinapate*. By placing my ear against the log and keeping very still I could hear others gnawing away inside with a click like that produced by snapping the nails of the thumb and first finger together. However, it was clear that if this was the larva of *Dinapate* it must grow at least a year before it would be as large as that described by Horn, so I decided to wait until the following spring before carrying out the plan which I had in mind.

This last spring (1917), I again went to Palm Canyon, sawed out of the prostrate trunk four two-and-a-half-foot lengths, taking them where the gnawing sounded most frequent and packed them out to my automobile, a distance of about two miles. Another section of this log was later obtained by Mr. J. R. Campbell, of the U. S. Bureau of Entomology. A week's further search of the various groups of palms failed to show any other possible host tree. In sawing the log into transportable lengths the saw disclosed several larvæ in the various cuts, two of which it bisected. The ones which were uncovered but not cut soon bored their way into the log and out of sight. However I was much surprised to find that there were evidently two separate broods of larvæ in the log, one apparently full grown and ready to pupate as shown by the presence of one pupa, the others about three fourths of an inch long. I am convinced that the larvæ seen last year are the ones now full grown and that the smaller specimens represent a brood deposited since the discovery of the log.

This log when discovered was full of sap and showed every



PALM CANYON, HOME OF *DINAPATE WRIGHTII*

